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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Randolph L. Campbell

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EXAMINER

ZHE, MENG YAO

ART UNIT

PAPER NUMBER

2195

MAIL DATE

DELIVERY MODE

07/02/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/814,216	Applicant(s) CAMPBELL ET AL.	
	Examiner MENG YAO ZHE	Art Unit 2195	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 April 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-11,13-20,22-29 and 31-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-11,13-20,22-29 and 31-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>5/4/2009, 1/21/2009</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-2, 4-11, 13-20, 22-29, 31-36 are presented for examination.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 19-20, 22-27 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The claims are directed to a signal directly or indirectly by claiming a medium and the Specification recites evidence where the computer readable medium is define as a "wave" (such as a carrier wave) and "RF link" (found in Para 63 of specification submitted on 3/31/2004). In that event, the claims are directed to a form of energy which at present the office feels does not fall into a category of invention. The following link on the World Wide Web is for the United States Patent And Trademark Office (USPTO) policy on 35 U.S.C. §101.

http://www.uspto.gov/web/offices/pac/dapp/opla/preognotice/guidelines101_20051026.pdf

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-2, 4-11, 13-20, 22-29, 31-36 are rejected under 35 U.S.C. 102(b) as being anticipated by Bugnion et al., Patent No. 6,496,847 (hereafter Bugnion).

5. Bugnion was cited in the previous office action.

6. As per claims 1, 10, 19, 28, Bugnion teaches an apparatus comprising:

a processor having a normal execution mode (Fig 3, unit 360) and a host execution mode (Fig 3, unit 340);

a virtual machine monitor (VMM) operable in conjunction with the host execution mode to create at least one protected mode environment to operate guest software in a virtual machine (Column 6, lines 12-25; Column 13, lines 35-38);

wherein responsive to a command to switch between protected modes, the VMM causes the processor to atomically switch between an original protected mode environment and a target protected mode environment (Column 12, lines 20-25, lines 36-38, lines 53-57).

a virtual machine control structure (VMCS) to store state information for use in switching between the original protected mode environment and the target protected mode environment, the VMCS to store state information related to the original protected mode environment (Column 4, lines 52-61).

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7. As per claims 2, 11, 20, 29, Bugnion teaches wherein switching between protected modes further includes entering a virtual machine execution (VMX) mode to enable virtual machine functionality (Column 6, lines 1-26; Column 5, lines 17-23).
8. As per claims 4, 13, 22, 31, Bugnion teaches wherein the virtual machine control structure (VMCS) further stores state information related to the target protected mode environment (Column 12, lines 53-57).
9. As per claims 5, 14, 23, 32, Bugnion teaches wherein the virtual machine control structure (VMCS) further stores a guest entry point field to point to a command used for instructing the processor to exit out of the original protected mode environment and a host entry point field to point to a command to instruct the processor to exit out of a virtual machine execution (VMX) mode (Column 11, lines 1-10, lines 21-26; Column 14, lines 11-23; Column 17, lines 25-33).
10. As per claims 6, 15, 24, 33, Bugnion teaches wherein the VMM causes the processor to enter a virtual machine execution (VMX) mode, to exit out of the original protected mode environment, and to enter into the target protected mode environment (Column 12, lines 20-25, lines 50-57; Column 13, lines 35-40; Column 18, lines 9-15).
11. As per claim 7, 16, 25, 34, Bugnion teaches wherein the VMM causes the target protected mode environment to exit out of the virtual machine (VMX) extension mode (Column 13, lines 35-40).
12. As per claims 8, 17, 26, 35, Bugnion teaches wherein the processor resumes operation with the target protected mode environment (Column 14, lines 5-10).

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13. As per claims 9, 18, 27, 36, Bugnion teaches wherein guest software operable in a protected mode environment includes an operating system (Column 13, lines 37-38).

Response to Arguments

14. Applicant's arguments filed on 4/22/2009 have been fully considered but are not persuasive.

15. In the remark, the applicant argued that:

i) Claims 19-27 overcome the 101 rejection with the amendment.

ii) Bugnion does not teach claim 3.

16. The Examiner respectfully disagrees with the applicant. As to point:

i) Although the applicant has amended claim 19 to be a machine-readable medium of a storage device, it still leaves room for the possibility that the medium could be signals or waves, since the specification that defined the machine-readable medium itself is unclear <i.e. the best way to overcome this is to delete the part of specification that mentions wave, signals, links.>.

ii) Bugnion teaches a VMM that has the ability to switch from the VM running on itself to the host. The VM running on the VMM corresponds to the original protected mode environment, and the host corresponds to the target protected mode environment. Because it is uncertain from the claim how the original and target protected mode environments are related to the VM, the Examiner has

mapped the original target protected mode to be the at least one protected mode environment operating in the virtual machine, while the target protected mode environment is mapped to the host <i.e. does the VM run on top of the VMM as well? Do both the original and target environment run on the VM? The applicant should have stated that both the original and target protected environment are both running on the VM, which in turn runs on the VMM to overcome this interpretation.>. Furthermore, when the VMM performs the switching, the VMM context is saved. The VMM context corresponds to the VMCS that stores state information for the switch.

Conclusion

17. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to MENGYAO ZHE whose telephone number is (571)272-6946. The examiner can normally be reached on Monday Through Friday, 7:30 - 5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on 571-272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Meng-Ai An/
Supervisory Patent Examiner, Art Unit 2195